

## ON THE APPLICATION OF THE NAME TEUTHIS TO A GENUS OF FISHES.

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TWO SPECIES were originally referred to the genus *Teuthis* by Linnaeus, one of which was later referred to the genus *Siganus* or *Amphacanthus*, and the other to the genus *Acanthurus*. There has been much diversity of opinion among recent authors respecting this usage. Dr. Günther has taken *Teuthis* for *Siganus*, and I have adopted the name in place of *Acanthurus*. Dr. Jordan has wavered between the two systems. Immediately after the publication of articles by Gill,<sup>1</sup> and Meek and Hoffman,<sup>2</sup> in which *Teuthis* was accepted instead of *Acanthurus*, he adopted the name with the same sense.<sup>3</sup> Later he dissented and expressed the opinion that "the change of the name of this genus from *Acanthurus* to *Teuthis*, as made by Gill and Meek, seems unnecessary. The name *Teuthis* was based by Linnaeus on *T. hepatus* and *T. jarus*. Its first restriction was to the latter species, a representative of the *Teuthis* of Günther, the *Siganus* of Forskäl."<sup>4</sup> He has adhered to this opinion since.<sup>5</sup> I shall now proceed to demonstrate that this opinion is the result of an imperfect view of the literature.

### I.

The name *Hepatus* was introduced informally into ichthyology by Artedi in 1738 and afterwards employed with a generic diagnosis by Gronow (Latin, *Gronovius*). Gronow, in his "*Zoophylacium*," recognized two species: (1) *Hepatus cauda fronteque inermibus*, and (2) *Hepatus mucronereflero utrinque prope caudam*; the former is an Acanthurid and the latter a Siganid or Amphacanthid. Further, the Acanthurid

<sup>1</sup>Proc. U. S. Nat. Mus., VII, pp. 275-281, 1884.

<sup>2</sup>Proc. Acad. Nat. Sci. Phila. 1881, pp. 227-231 (1884).

<sup>3</sup>Proc. U. S. Nat. Mus., VIII, p. 386, 1885.

<sup>4</sup>Proc. U. S. Nat. Mus., IX, p. 49, 1886.

<sup>5</sup>Proc. U. S. Nat. Mus., XI, p. 552, 1888; XII, p. 650, 1889; XIII, p. 323, 1890; XIV, p. 113, 1891, etc.

was described from a specimen of the West Indian *A. chirurgus*, which was recorded by Dr. Günther<sup>1</sup> in 1861 as being then in the British Museum.

## II.

The name *Teuthis* was introduced in the twelfth edition of the *Systema Naturæ* by Linnæus<sup>2</sup> as a substitute for *Hepatus*, and in fact his knowledge of the group so called was originally chiefly derived from Gronow. From misapprehension as to the position of the ventral fins, he referred it to the "Pisces Abdominales" between *Silurus* and *Loricaria*, and it must be here recalled that he had already recognized three species of Acanthurids which he associated with the *Chatodons*, viz: *C. (10) nigricans*, *C. (12) lineatus*, and *C. (13) triostegus*. Had it not been for the misapprehension, he would doubtless have referred his species of *Teuthis* also to *Chatodon*. Linnæus was inferior as an ichthyologist to both Artedi and Gronow, and the only reason for rejecting the earlier and adopting his later name for a genus, is because the binomial nomenclature was not adopted by Gronow in the work cited. Accepting, as we do, these principles, we commence with Linnæus, and first have to inquire what that naturalist actually meant. All that is published in the twelfth edition of "*Systema Naturæ*"<sup>3</sup> concerning *Teuthis* is here reproduced, it being recalled that the genus was referred to the *Pisces Abdominales*.

176. TEUTHIS. *Caput antice subtruncatum.*

*Membr. branch. radiis V.*

*Dentes simplici serie, æquales, rigidi, approximati.*

HEPATUS. 1. T. spina utrinque caudali recumbente mobili.

*Brown. jam. 455. Teuthis fusca caruleo nitens, aculeo simplici utrinque ad caudam.*

*Gron. zooph. 353. Hepatus mucrone reflexo utrinque prope caudam.*

D.  $\frac{9}{34}$  P. 16. V.  $\frac{1}{3}$  A.  $\frac{3}{26}$  C. . .

*Seb. mus. 3, p. 104, t. 33, f. 3. Chatodon carulescens, dorso nigro, cauda æquali exalbido nigroque varia.*

*Catesb. car. 2, p. 10, t. 1, f. 1. Turdus rhomboides.*

*Valent. ind. 3, f. 77, 383, 401.*

*Habitat in Carolina, Amboina.*

*Caput maxime declivè. Dentes æquales, rigidi, unica serie. Pinna dorsalis radiis primis 8 spinosis. Ventrals 1 spinoso. Anals 3 spinosis. Ad utrumque latus caudæ Spina valida, subulata, mobilis, erigibilis, recumbens, in sulco latitans.*

JAVUS. 2. T. cauda utrinque mutica. *Gron. zooph. 352. Hepatus cauda fronteque inermibus.* D.  $\frac{1}{2}$  P. 15. V.  $\frac{2}{3}$  A.  $\frac{7}{16}$  C.

• *Valent. ind. 3, p. 339, f. 410. Leervisich.*

*Habitat ad Javam.*

*Corpus maculis longitudinalibus carulescentibus. Cauda lunata. Pinna- rum ventralium radius primus et ultimus spinosus.*

<sup>1</sup> Cat. Fish. Brit. Mus., III, p. 330.

<sup>2</sup> Linnæus, Syst. Nat., I, p. 507.

<sup>3</sup> Vol. I, p. 507.

The first of these species is evidently the same as the second species of *Hepatus*, while the second is the first species of *Hepatus* of Gronow's system. Linnæus did not know these species, as such, through autopsy, and derived his knowledge of them almost entirely from Gronow, simply adding some synonyms, in several cases erroneously.

I repeat that the genus *Teuthis* of Linnæus was purely the result of misapprehension or ignorance; and the genus being misplaced in the order Abdominales, its characters contrast with those of any genus of that order, but not with those of species referred to the Thoracici, some of whose representatives, retained in the genus *Chatodon*, have precisely the same characters, and in fact are nearly related congeners of one of the species of *Teuthis*. The characters selected for the generic diagnosis, too, are of the least value and not even applicable in all cases, the only important characteristic being the dentition, and in the expression thereof Linnæus was more successful than Gronow, although in other respects much inferior.

Although almost all of the Linnean genera were composite and many of them embraced representatives of a number of distinct families, the fact that the Swedish naturalist referred two generic types to *Teuthis* has appeared to some good ichthyologists a sufficient reason to ignore the name for either. Thus both Kner and Klunzinger adopted the names *Amphacanthus* and *Acanthurus*.

Kner remarked:<sup>1</sup>

Der Name *Teuthis* dürfte kaum berechtigt sein, obigen Gattungsnamen wieder zu verdrängen, da Linné ihn wohl für einige Arten dieser, aber auch der Gatt. *Acanthurus* benützte.

Klunzinger observed:<sup>2</sup>

Der Name *Amphacanthus* ist vorzuziehen, da Linné unter dem Namen *Teuthis* sowohl einen *Amphacanthus* als einen *Acanthurus* beschrieben hat.

### III.

In 1775 Forskal, in his "Descriptiones Animalium [etc.] quæ in itinere orientale observavit," introduced new generic or group names for species severally congeneric with the species of *Hepatus* or *Teuthis*, in a somewhat informal manner, but which, nevertheless, admits of no doubt as to his meaning and intent. The data may be given in the order of the volume.

First, on the reverse of the false title page (ii, but not numbered) succeeding the introduction and table of contents, is a list of "Nova Genera," among which four "Piscium" are named, viz:

*Salaria*. (*Gadus* 3.)

*Scarus*. (*Scarus* 11-18.)

*Siganus*. (*Scarus* 9-10.)

*Acanthurus*. (*Chatodon* 88-89.)

<sup>1</sup>The numbers after the genera refer not to the number of species in the respective genera, but to the serial numbers of all the fishes described.

<sup>2</sup>Kner, Novara Exped. Fische, p. 205, 1865.

<sup>3</sup>Verh. k. k. zool.-bot. Ges. Wien, XXI, p. 501, 1871.

Secondly, in the succeeding "Faune Orientalis Conspectus" prefatory to the "Descriptiones Animalium"<sup>1</sup> the following names are to be found:

*Scarus*: novum genus. Σκάρος.

9 (a) *rivulatus*: *Djezari* vel *Sigân*. [Arabic letters.] Nov. genus: *Siganus*.

10 (b) *stellatus*. *Ghacjehân*. [Arabic letters.]

No corresponding mention of the name *Acanthurus* occurs under *Chatodon*.<sup>2</sup>

Thirdly, on referring to the text (page 25) these species are mentioned in the following terms:

*Scarus* novum genus antiquo nomine Σκάρος. Character genericus: Dentium loco maxillæ ipse eminentes, margine dentato-crenatæ, ossæ.

9. *Scarus siganus*; *rivulatus*; maxillis continnis, complanatis, margine serrato-denticulatis: denticulis approximatis, filiformibus; a medio labio paulatim decre-scentibus.

[A detailed description of the species follows.]

Obs. Videtur genus proprium una cum sequente constituere; quum habitus prorsus proprius. Nomen *Sigani* desumptum ex Arab. Sidjan vel Sigian.

10. *Scarus stellatus*; ovalis fasciis annulis cæruleo-pallidis, subhexagonis, undique contignis.

The name *Siganus* was thus (1) formally proposed as that of a new genus or "novum genus"; (2) the diagnosis of the "*Scarus siganus*" was related intentionally to the generic characters, as will be perceived by a comparison of it with that of the succeeding, and (3) the group was recognized as a natural genus on account of the peculiar habit or appearance of the two species for which it was proposed.

The "new genus" was quite properly adopted by Cuvier, for a time at least.

In connection with *Chatodon*,<sup>3</sup> a proposition was made to distribute the species of the Linnean genus among three subdivisions, as follows:

Genus hoc subdivisionem admittit: (a) *Chatodon*: dentibus filiformibus, brevibus, numerosis, multorum ordinum, densis, acutis, inferioribus sensim minoribus. P. Br. radiis 6. Spinae P. A. 3. (b) *Abu-def duf*: dentibus maxillaribus unius seriei, filiformibus, contiguis, submobilibus, obtusis, dentibus faucium nullis, annulo subtus circa oculos. P. Br. rad. 5. Spinae P. A. 2. (c) *Acanthurus*: dentibus unius seriei, rigidis, acutis, contiguis, vel simplicibus vel lobatis. Cauda in utroque latere aculeo uno vel pluribus; exserto et rigido; vel mobili et recondendo. Diversum prorsus a *Chatodonte* genus; aliquande propriam constituens familiam.

This procedure was even less formal than the introduction of the genus *Siganus*, but, nevertheless, the name *Acanthurus* has been very generally accepted as a generic name for the species of the family distinguished by the characters attributed to it.

It is again to be recalled that the first Linnean species of *Teuthis* is congeneric with the *Acanthuri* of Forskål, while the other is congeneric with the two *Sigani* of the same author.

<sup>1</sup> Page x.

<sup>2</sup> Pages xii, xiii.

<sup>3</sup> Page 25.

## IV.

In 1817 Cuvier, in the first edition of the "Règne Animal"<sup>1</sup> adopted the two genera of Forskal with the following names:

*Les Sidjans.* (*Amphacanthus*, Schn.)

*Les Acanthures.* Bl. (*Theutis*, L. *Harpurus*, Forsk.)

If this means anything, it must be that he would adopt the name "Theutis" for, or at least limit it to, the "*Acanthures*," but the meaning is certainly ambiguous; the restriction, however, is not.

In 1829 Cuvier, in the second edition of the "Règne Animal,"<sup>2</sup> retained the same genera under a different guise, viz:

*Les Sidjans.* (*Siganus*, Forsk.) *Buro de Commerson*; *Centrogaster* de Houttuyn;  
*Amphacanthus* de Bloch.

*Les Acanthures* (*Acanthurus*, Lacép. et Bl.). *Harpurus*, Forster. Vulgairement Chirurgiens.

Here the name "*Theutis*" or "*Teuthis*" is entirely ignored, but *Siganus* is accepted as the scientific name of the genus with the limits assigned to it by Forskal.

In 1822 Fleming<sup>3</sup> admitted as genera of the fourth section "(d)" of "Scomberida," the genera "140, *Amphacanthus* (*Searus siganus*)," "141, *Theutis* (*T. hepatus*)," and "142, *Naseus*." *Theutis* (*Teuthis*) is thus definitely restricted by specific mention of type to the surgeon-fishes.

In 1832 Minding, in his "Lehrbuch der Naturgeschichte des Fisches,"<sup>4</sup> adopted the same two genera with the following names:

(1) Sidian, *Amphacanthus*.

(2) Felsenfisch, *Teuthis*: (*Teuthis* eine Säpianart bei den Gr.).

One species was mentioned, the "Wundarzt, *T. chirurgus*."

In 1833 Bonaparte (then Prince of Musignano), in the second part of his "Saggio di una Distribuzione metodica degli Animali Vertebrati," gave the following genera under *Teuthididae*:<sup>5</sup>

158. *Siganus*, Forsk. (*Buro. Comm. Centrogaster*, Houtt.  
*Amphacanthus*, Bl.)

M. Indico. 20.

159. *Teuthis* L. (*Acanthurus*, Lacép.; *Harpurus*, Forst.;  
*Aspisurus*, Lacép. del.)

Atl. Pac. fra i Trop. 25.

1. *Teuthis*, Nob.

2. *Acanthurus*, Nob.

3. *Scopas*, Nob.

4. *Ctenodon*, Nob.

Both names (*Siganus* and *Teuthis*) were thus again used with the limits still retained by me.

<sup>1</sup> Vol. II, p. 330.

<sup>2</sup> Vol. II, p. 223.

<sup>3</sup> Philosophy of Zoology, p. 396.

<sup>4</sup> Page 111.

<sup>5</sup> The other genera of *Teuthididae* admitted were: 160, *Prionurus*, Lacép.; 161, *Nasens*, Commers. (*Monoceros*, Bl.); 162, *Axinurus*, Cuv.; 163, *Prionotichthys*, Nob. (*Prionon*, Cuv.).

## V.

Far from the "first restriction" of *Teuthis* being to *Siganus* (as claimed by Jordan), it was not till near the close of the first half of the nineteenth century that any proposition to that effect was published.

In 1849 Dr. Cantor,<sup>1</sup> in his Catalogue of Malayan Fishes, used the name *Teuthis* in place of *Siganus* or *Amphacanthus*.

In 1854 Dr. Gray published a "Catalogue of Fish collected and described by Lawrence Theodore Gronow," now in the British Museum, and this was the first publication of a manuscript of that great ichthyologist, who died in 1778. Unfortunately no attempt was made by an editor to collocate the sheets in systematic order,<sup>2</sup> and hence we find closely allied genera often widely removed and approximated to those with which they have no affinity. Among those widely separated are *Teuthis* (p. 142) and *Aconurus* (p. 190). The former name had been substituted by Gronow for his own *Hepatus*, but restricted to the Sigani, and the latter was a new name for the Acanthuri.

In 1861 Dr. Günther<sup>3</sup> followed Cantor and Gronow in retaining the name *Teuthis* for the amphacanthoid fishes and *Acanthurus* for the surgeon fishes; he also revived the name *Aconurus* for what are now known to be young of the Acanthuri, although none were known to Gronow himself.<sup>4</sup>

The example thus set by Dr. Günther has been generally followed by his successors.

## VI.

It may become known to some, that about 1840 Bonaparte recognized two families bearing the same names as the Güntherian—*Teuthididae* and *Acanthuridae*,—and it might naturally be supposed that the names represented the same groups defined by Günther. Even if such were the case, the past nomenclature would not be affected thereby, and at most a change of opinion on the part of Bonaparte would have been manifested. Nevertheless, even such change did not really take place, and the names in question simply indicate a strange mental phase or confusion that existed for a short time. The status may be of sufficient interest to detail.

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<sup>1</sup>Journal of the Asiatic Society of Bengal, XVIII. p. 1189.

<sup>2</sup>"Some person, evidently not the author, or one well conversant with the subject, has marked the genera in the manuscript," which had never been sewed together, with a consequent number. (Gray in Preface, pp. vi. vii.) The sequence of the Zoophylacium should have been adopted.

<sup>3</sup>Catalogue of the Acanthopterygian Fishes, III, p. 313.

<sup>4</sup>"The name is taken from Gronow, who intended to apply it to fishes of this family." (Günther, III, p. 345.)



Bonaparte's views as to the Teuthididæ, from time to time, are as follows:

Family TEUTHIDIDÆ.

1833.

*Teuthididæ*, BONAPARTE, Saggio Distr. Metod. Animal Vertebr., p. 34, 1833.

1838.

*Teuthydidæ*, BONAPARTE, N. Annal. Sc. Nat., Anno 9, II, p. 133 (Cycloidei), 1838.

1840.

*Acanthuridæ*, BONAPARTE, N. Annal. Sc. Nat., Anno 2, IV, p. 190 (Ctenoidei), 1840.

*Teuthididæ*, BONAPARTE, N. Annal. Sc. Nat., Anno 2, IV, p. 274 (Cycloidei), 1840.

1841.

*Acanthuridi*, BONAPARTE, Fauna Ital., Pesci, Int., p. [6].

*Teuthydidi*, BONAPARTE, Fauna Ital., Pesci, Int., p. [11].

1846.

*Teuthydæ*, BONAPARTE, Cat. Metod. Pesci Europei, p. 7 (with subfamilies Amphacanthini and Tenthyni), 1846.

1850.

*Teuthydidæ*, BONAPARTE, Consp. Syst. Piscium, 1850.

Originally Bonaparte adopted the family Theutyes of Cuvier, with the same limits attributed to it by the great anatomist, but provided the regularly formed family name *Teuthididæ* (1833) or, less correctly, *Tenthydidæ* (1838).

In 1840, however, he widely separated the constituents of the old family in the following manner, only special characters being here reproduced:

CTENOIDEI.

Familia 18. ACANTHURIDÆ. — Squamis ruvidis.<sup>1</sup>

Subfamilia 47. *Acanthurini*. Radii dorsales spinosi a mollibus haud distincti: pinnae ventrales thoracici.

CYCLOIDEI.

Familia 45. TEUTHIDIDÆ. —; radii spinosi plures in pinna dorsali, unus saltem in anali et in utraque ventrali.

Subfamilia *Teuthidini*. Pinna dorsalis unica.

The *Acanthuridæ* contain typical representatives of the family so called, but the *Teuthididæ* do not answer at all to the *Siganids*. The attribute of several dorsal spines and at least a single spine in the anal and each ventral, as well as the single dorsal fin, are descriptive only of *Acanthurids*, and not *Siganids*. The cycloid scales are the only characters distinctive of *Siganids*, and in 1842 Agassiz, in the seventeenth

<sup>1</sup>There is no adjective *ruvidus* in classical Latin, and it is not evident why *scabris* should not have been used as the exact equivalent of what Bonaparte meant, instead of a latinized form of the Italian *ruvido*.

livraison of his "*Poissons*,"<sup>1</sup> gave the following views respecting the *Teuthyes*:

*De la famille des Teuthyes.*

Cette petite famille, qui n'est composée [sic] que de quelques genres, se distingue assez facilement par ses écailles, d'une petitesse extrême, répandues en très-grande quantité sur toute la peau. Il faut en éliminer le genre *Amphacanthus*, que ses grandes écailles cycloïdiques et ses autres caractères zoologiques obligent à placer dans une autre famille. Chez le reste des *Teuthyes*, et notamment chez les *Acanthurus* et les *Nasus*, les écailles forment de petites esquilles transparentes, lisses, dépourvues de tout ornement et hérissées, au bord postérieur, de quelques petites épines assez effilées, qui ressemblent un peu à celles que nous avons rencontrées chez les *Zanclus* de la famille des *Squamipennes*.

Perhaps it was this publication that again drew Bonaparte's attention to the families, for soon afterwards he reverted to his original views as to the limits of the family, recombining his *Tentacidæ* and *Acanthuridæ* in a single family, at first (1846) under the name *Teuthyidæ*, and later (1850) again resuming the name *Tentacidæ*. He made an advance, however, in the recognition of two subfamilies, *Amphacanthini* and *Teuthyini* (1846) or *Tentacidinae* (1850).

## VII.

*Teuthis* is one of the many names inflicted on scientific nomenclature by Linnæus as a result of his proclivity to take classical names and pervert them to the designation of forms which are not related to and possess no intimate characters or analogies in common with the species to which they were originally applied. The *Teuthis* (*Τεuthίς*) of the Greeks was a squid (*Loliginid*), but there was also a gregarious fish mentioned once by Aristotle<sup>2</sup> as the *Teuthos* (*Τεuthός*) and respecting which nothing more is known.<sup>3</sup> It may be that Linnæus intended to take the latter name, but in fact he took the former, and, therefore, as long as the present code of nomenclature is retained, the surgeon-fishes, belonging to a family entirely unknown to the Greeks, must bear a name originally given to squids.<sup>4</sup> The name *Teuthos*, however, would only have the advantage in that it belonged to a fish, and its exact pertinence is unknown.

*Teuthis* itself has not been retained unimpaired. It was transformed into *Theuthis* and *Theutis* by Cuvier (1798 and 1817), and gave rise to the family name *Theuties*,<sup>5</sup> *Teuthyei*,<sup>6</sup> *Teuthyes*<sup>7</sup> and *Teuthyeæ*,<sup>8</sup> of Agassiz.

<sup>1</sup>Vol. I, p. 88.

<sup>2</sup>Vol. IX, Chap. 3.

<sup>3</sup>It is quite possible that the *Τεuthος* may have been placed among the true fishes inadvertently, or that some error of a copyist has crept in. *Teuthis* and *Teuthos* are both used by Aristotle as names of different kinds of squids.

<sup>4</sup>The case is just as bad, if not worse, if *Teuthis* is used for the *Siganids*.

<sup>5</sup>*Theuties*, Agassiz, Poiss. Foss., IV, pp. xiii, 212.

<sup>6</sup>*Teuthyei*, Agassiz, Poiss. Foss., IV, p. 41.

<sup>7</sup>*Teuthyes*, Agassiz, Poiss. Foss., I, 88; IV, p. 206.

<sup>8</sup>*Teuthyeæ*, Agassiz, Rep. Brit. Assn. Adv. Sci., 1844, p. 288.



Inasmuch as the oblique cases take  $-ιδ$  ( $Τευθιδης$ ,  $-ιδους$ ), the proper form of the family name is *Teuthididae*.

### VIII.

The foregoing citations (which might have been much increased) are sufficient to demonstrate that *Teuthis* should be used in place of *Acanthurus* and not of *Siganus*. From whatever point of view we look, we are forced to this conclusion.

1. The first species of *Teuthis* was an Acanthurid.
2. The genus *Siganus* always appeared before *Acanthurus*, as well in the list of new genera and the table of contents, as in the descriptive portion of Forskål's work.
3. The genus *Teuthis* was first reduced by elimination to an Acanthurid.
4. The name *Teuthis* was first positively restricted to Acanthurids.

The conclusions thus formulated may be supplemented by a summary of the synonymy and diagnosis of the genus *Teuthis* as now limited.

#### Genus TEUTHIS.

- < *Hepatus*, GROXOW, Zoophylacium, p. 113, 1763.  
 < *Teuthis*, LINNÉ, Systema Naturæ, 12th ed., I, p. 597, 1766.  
 < *Acanthurus*, FORSKÅL, Descriptiones Animalium, p. 25, 1775 (section of *Chatodon*, Linn.).  
 < *Harpurus*, FORSTER in Linnæi Syst. Nat., ed. Gmelin, I, p. 1269?, 1788.  
 < *Acanthurus*, BLOCH, Systema Ichthyologiae, ed. Schneider, p. 211, 1801.  
 × *Aspisurus*, LACÉPÈDE, Hist. Nat. des Poissons, IV, p. 556, 1802.  
 < *Les Theuthies* (*Theuthis*), CUVIER, Tab. El. Hist. Nat., an. 6, p. 371 (1798).  
 < *Les Acanthures* BL. (*Theutis*, L.; *Harpurus*, Forsk.), CUVIER, Règne Animal, II, p. 330, 1817.  
 < *Teuthis*, FLEMING, Phil. Zool., p. 396, 1822.  
 < *Les Acanthurus*, LACÉPÈDE et BLOCH; CUVIER, Règne Animal, 2d ed., II, p. 223, 1829.  
 < *Teuthis*, BONAPARTE, Giorn. Accad. di Scienze, LII (Saggio Distrib. Metod. Animali Vertebr. a Sangue Freddo), p. 34, 1833.  
 ?? *Acanthurus*, BONAPARTE, Giorn. Accad. di Scienze, LII (Saggio Distrib. Metod. Animali Vertebr. a Sangue Freddo), p. 34, 1833. (Subgenus of *Teuthis* without diagnosis or type.)  
 < *Teuthis*, MÜLLER, Naturg. Fische, p. 111, 1832.  
 > *Acanthurus*, SWAINSON, Nat. Hist. and Class. Fishes, etc., II, pp. 255, 1839.  
 > *Teuthys*, SWAINSON, Nat. Hist. and Class. Fishes, etc., II, pp. 255, 1839.  
 × *Ctenodon*, SWAINSON, Nat. Hist. and Class. Fishes, etc., II, pp. 255, 1839.  
 = *Aconurus*, GROXOW, Cat. of fish collected and described, p. 142, 1851.  
 = *Acanthurus* § 1, GÜNTHER, Cat. Fish. Brit. Mus., III, pp. 325, 327, 1861.  
 = *Aconurus*, GÜNTHER, Cat. Fish. Brit. Mus., III, p. 345 (young).  
 < *Rhombotides*, BLEEKER.  
 < *Acanthurus*, KNER, Novara Exped., Fische, pp. 210, 212 (excludes *Scopas* and *Aconurus*).  
 = *Acanthurus* A. *Rhombotides*, DAY, Fishes of India, I, p. 202, 1876.  
 < *Acanthurus*, GÜNTHER, Ann. and Mag. Nat. Hist., (4), VIII, p. 320, 1871 (including *Aconurus* and *Keris* as probable young).  
 < *Acanthurus*, GÜNTHER, Journ. Mus. Godeffr., IX, p. 106, 1875.  
 = *Teuthis*, GILL, Proc. U. S. Nat. Mus., VII, p. 278, 1881.

*Diagnosis.*—Teuthidids with a pair of antorse movable caudal spines, strong fixed teeth, 5-rayed ventrals, and generally 9 (rarely 7 or 8) dorsal spines.

*Type.*—*T. hepatus*, LINNÆUS=*Acanthurus chirurgus*, BLOCH, etc.

The forms actually belonging to the genus *Teuthis* as here understood are the following:

Present names.	Names of Günther under <i>Acanthurus</i> .
<i>Teuthis triostega</i> .....	<i>Acanthurus triostegus</i> , Linnaeus.
<i>T. guttata</i> .....	<i>A. guttatus</i> , Forst.
<i>T. hepatus</i> .....	<i>A. chirurgus</i> , Bloch.
<i>T. matoides</i> .....	<i>A. matoides</i> , C. & V.
<i>T. nigrofuscus</i> .....	<i>A. nigrofuscus</i> , Forsk., 1775.
<i>T. bipunctatus</i> .....	<i>A. bipunctatus</i> , Gthr., 1861.
<i>T. nigroris</i> .....	<i>A. nigros</i> , Gthr., 1861.
<i>T. dorensis</i> .....	<i>A. dorensis</i> , C. & V.
<i>T. chrysosoma</i> .....	<i>A. chrysosoma</i> , Blkr.
<i>T. rubropunctata</i> .....	<i>A. rubropunctatus</i> , Rüpp.
<i>T. marginata</i> .....	<i>A. marginatus</i> , C. & V.
<i>T. lineata</i> .....	<i>A. lineatus</i> (Linn.).
<i>T. striata</i> .....	<i>A. striatus</i> , O. & G.
<i>T. sohal</i> .....	<i>A. sohal</i> , Forsk.
<i>T. undulata</i> .....	<i>A. undulatus</i> , C. & V.
<i>T. dussumieri</i> .....	<i>A. dussumieri</i> , C. & V.
<i>T. grammoptila</i> .....	<i>A. grammoptilus</i> , Blkr.
<i>T. corulea</i> .....	<i>A. coruleus</i> , Bl. & Schn.
<i>T. lineolata</i> .....	<i>A. lineolatus</i> , C. & V.
<i>T. olivacea</i> .....	<i>A. olivaceus</i> , Bl. & Schn.
<i>T. pyroferus</i> .....	<i>A. pyroferus</i> , Kittlitz.
<i>T. tennentii</i> .....	<i>A. tennentii</i> , Gthr.
<i>T. gahn</i> .....	<i>A. gahn</i> , Forsk.
<i>T. nummifer</i> .....	<i>A. nummifer</i> , C. & V.
<i>T. glaucopareius</i> .....	<i>A. glaucopareius</i> , C. & V.
<i>T. celebius</i> .....	<i>A. celebius</i> , Bleek.
<i>T. fuscus</i> .....	<i>A. fuscus</i> , Steind.
<i>T. leucosternon</i> .....	<i>A. leucosternon</i> , Benn.
<i>T. achilles</i> .....	<i>A. achilles</i> , Shaw.
<i>T. triangulus</i> .....	<i>A. triangulus</i> , C. & V.
<i>T. fraterculus</i> .....	<i>A. fraterculus</i> , C. & V.
<i>T. bahianus</i> .....	<i>A. bahianus</i> , Castelnau, 1855.

## SPECIES ADDED SINCE 1861.

<i>Teuthis aterrima</i> .....	<i>Acanthurus aterrimus</i> , Gthr., 1871.
<i>T. polyzona</i> .....	<i>Rhomboides polyzona</i> , Blkr., 1874.
<i>T. virgata</i> .....	<i>Acanthurus virgatus</i> , V. & S., 1875.
<i>T. ecerulea</i> .....	<i>Aconurus eceruleatus</i> , Poey, 1875.
<i>T. bahianus</i> .....	<i>Aconurus nigriculus</i> , Poey, 1875.
<i>T. aurolineata</i> .....	<i>Acanthurus aurolineatus</i> , Day, 1876.
<i>T. minorivæ</i> .....	<i>A. minorivæ</i> , Steind., 1876.
<i>T. plagiata</i> .....	<i>A. plagiatus</i> , Peters, 1876.
<i>T. blochii</i> .....	<i>Aconurus formosus</i> , Cast., 1873.
	<i>Acanthurus blochii</i> , C. & V. (formerly
	<i>matoides</i> , C. & V.), Gthr., 1875.
<i>T. zebra</i> .....	<i>A. zebra</i> , De Vis, 1884.
<i>T. erestonis</i> .....	<i>T. erestonis</i> , Jordan & Starks, 1895.

\* The *Teuthis erestonis* has been described by Jordan and Starks in a memoir on the Fishes of Sinaloa received just before the revised proof of the present communication. It appears therefrom that Dr. Jordan has reverted to the use of *Teuthis* in the sense here defended, as indeed he had previously informed me by letter he would do.

The following forms have been connected with the name *Teuthis*, viz:

Former names.	Names adopted.
<i>Teuthis hepatus</i> , L., 1758.....	<i>Teuthis hepatus</i> .
<i>T. javus</i> , L., 1758.....	<i>Siganus javus</i> .
<i>T. australis</i> , Gray, 1826.....	<i>Teuthis triostegus</i> .
<i>T. concatenatus</i> (C. & V.), Cantor, 1850.....	<i>Siganus concatenatus</i> .
<i>T. dorsalis</i> (C. & V.), Cantor, 1850.....	<i>S. dorsalis</i> .
<i>T. brevirostris</i> , Gron., 1854.....	<i>S. albopunctatus</i> .
<i>T. tubulosa</i> , Gron., 1854.....	<i>S. vulpinus</i> .

(Names of Günther, 1861.)

<i>T. javus</i> (L.).....	<i>S. javus</i> .
<i>T. canaliculata</i> (Park).....	<i>S. canaliculatus</i> .
<i>T. concatenata</i> (C. & V.).....	<i>S. concatenatus</i> .
<i>T. corallina</i> (C. & V.).....	<i>S. corallinus</i> .
<i>T. vermiculata</i> (C. & V.).....	<i>S. vermiculatus</i> .
<i>T. labyrinthodes</i> (Bleek.).....	<i>S. labyrinthodes</i> .
<i>T. sutor</i> (C. & V.).....	<i>S. sutor</i> .
<i>T. margaritifera</i> (C. & V.).....	<i>S. margaritiferus</i> .
<i>T. tumifrons</i> (C. & V.).....	<i>S. tumifrons</i> .
<i>T. dorsalis</i> (C. & V.) Cantor.....	<i>S. dorsalis</i> .
<i>T. oramin</i> (Bl. & Schn.) Gthr.....	<i>S. oramin</i> .
<i>T. albopunctata</i> (Schl.).....	<i>S. albopunctatus</i> .
<i>T. striolata</i> , Gthr.....	<i>S. striolatus</i> .
<i>T. hexagonata</i> (Bleek.).....	<i>S. hexagonatus</i> .
<i>T. guttata</i> (Bl.).....	<i>S. guttatus</i> .
<i>T. stellata</i> (Forsk.).....	<i>S. stellatus</i> .
<i>T. notosticta</i> (Richardson).....	<i>S. notostictus</i> .
<i>T. fuscescens</i> (Mont.).....	<i>S. fuscescens</i> .
<i>T. lurida</i> (Rüpp.).....	<i>S. luridus</i> .
<i>T. nebulosa</i> (Bl. & Schn.).....	<i>S. punctatus?</i>
<i>T. argentea</i> (Q. & G.).....	<i>S. argenteus</i> .
<i>T. marmorata</i> (Q. & G.).....	<i>S. marmoratus</i> .
<i>T. lineata</i> (C. & V.).....	<i>S. lineatus</i> .
<i>T. sigana</i> (Forsk.).....	<i>S. sigan</i> .
<i>T. tetrazona</i> (Bleek.).....	<i>S. tetrazona</i> .
<i>T. doliata</i> (Cuv.).....	<i>S. doliatus</i> .
<i>T. puella</i> (Schleg.).....	<i>S. puella</i> .
<i>T. virgata</i> (C. & V.).....	<i>S. virgatus</i> .
<i>T. vulpina</i> (S. & M.).....	<i>S. vulpinus</i> .

SPECIES ADDED SINCE 1861.

<i>Teuthis mertensii?</i> (C. & V.) Kler, 1865.....	<i>Siganus mertensii?</i>
<i>T. oligosticta</i> , Kner, 1868.....	<i>S. oligostictus</i> .
<i>T. rostrata</i> , (C. & V.) Gthr., 1874.....	<i>S. rostratus</i> .
<i>T. studeri</i> , Peters, 1876.....	<i>S. studeri</i> .
<i>T. gibbosus</i> , De Vis, 1884.....	<i>S. gibbosus</i> .
<i>T. teuthopsis</i> , De Vis, 1884.....	<i>S. teuthopsis</i> .
<i>T. flava</i> , De Vis, 1884.....	<i>S. flava</i> .
<i>T. vitianus</i> , Sauvage, 1886.....	<i>S. vitianus</i> .
<i>T. abhortani</i> , (C. & V.) Sauvage, 1891.....	<i>S. abhortani</i> .